(1) 6

SEQUENCE LISTING

- (1) GENERAL INFORMATION:

 - (ii) TITLE OF INVENTION: Novel Cytokine That Binds CD30
 - (iii) NUMBER OF SEQUENCES: 23
 - (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Kathryn A. Seese, Immunex Corporation
 - (B) STREET: 51 University Street
 - (C) CITY: Seattle
 - (D) STATE: Washington
 - (E) COUNTRY: USA
 - (F) ZIP: 98101
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: Apple Macintosh
 - (C) OPERATING SYSTEM: Apple 7.1
 - (D) SOFTWARE: Microsoft Word, Version 5.1a
 - (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: --to be assigned--
 - (B) FILING DATE: 12 APRIL 1994
 - (C) CLASSIFICATION:
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 07/966,775
 - (B) FILING DATE: 27-OCT-1992
 - (C) CLASSIFICATION:
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 907,224
 - (B) FILING DATE: 01-JUL-1992
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 899,660
 - (B) FILING DATE: 15-JUN-1992
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 892,459
 - (B) FILING DATE: 02-JUN-1992
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 889,717
 - (B) FILING DATE: 26-MAY-1992
 - (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Seese, Kathryn A.
 - (B) REGISTRATION NUMBER: 32,172
 - (C) REFERENCE/DOCKET NUMBER: 2804-E

| (1x) TELECOMMUNICATION INFORMA | TANT |
|--------------------------------|------|

- (A) TELEPHONE: (206)587-0430
- (B) TELEFAX: (206)233-0644
- (C) TELEX: 756822

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1788 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA to mRNA
 - (iii) HYPOTHETICAL: NO
 - (iv) ANTI-SENSE: NO
 - (vii) IMMEDIATE SOURCE:
 - (B) CLONE: huCD30
 - (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 1..1788
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
- ATG CGC GTC CTC CTC GCC GCG CTG GGA CTG CTG TTC CTG GGG GCG CTA 48

 Met Arg Val Leu Leu Ala Ala Leu Gly Leu Leu Phe Leu Gly Ala Leu

 1 10 15
- CGA GCC TTC CCA CAG GAT CGA CCC TTC GAG GAC ACC TGT CAT GGA AAC 96
 Arg Ala Phe Pro Gln Asp Arg Pro Phe Glu Asp Thr Cys His Gly Asn
 20 25 30
- CCC AGC CAC TAC TAT GAC AAG GCT GTC AGG AGG TGC TGT TAC CGC TGC ·144
 Pro Ser His Tyr Tyr Asp Lys Ala Val Arg Arg Cys Cys Tyr Arg Cys
 35
 40
 45
- CCC ATG GGG CTG TTC CCG ACA CAG CAG TGC CCA CAG AGG CCT ACT GAC 192
 Pro Met Gly Leu Phe Pro Thr Gln Gln Cys Pro Gln Arg Pro Thr Asp
 50 55 60
- TGC AGG AAG CAG TGT GAG CCT GAC TAC TAC CTG GAT GAG GCC GAC CGC 240 Cys Arg Lys Gln Cys Glu Pro Asp Tyr Tyr Leu Asp Glu Ala Asp Arg
- TGT ACA GCC TGC GTG ACT TGT TCT CGA GAT GAC CTC GTG GAG AAG ACG 288
 Cys Thr Ala Cys Val Thr Cys Ser Arg Asp Asp Leu Val Glu Lys Thr
- CCG TGT GCA TGG AAC TCC TCC CGT GTC TGC GAA TGT CGA CCC GGC ATG 336
 Pro Cys Ala Trp Asn Ser Ser Arg Val Cys Glu Cys Arg Pro Gly Met
 100 105 110



| TTC Phe | TGT Cys | TCC Ser 115 | ACG Thr | TCT Ser | GCC Ala | GTC Val | AAC Asn 120 | TCC Ser | TGT Cys | GCC Ala | CGC Arg | TGC Cys 125 | TTC Phe | TTC Phe | CAT His | 384 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| TCT Ser | GTC Val 130 | TGT Cys | CCG Pro | GCA Ala | GGG Gly | ATG Met 135 | ATT Ile | GTC Val | AAG Lys | TTC Phe | CCA Pro 140 | GGC Gly | ACG Thr | GCG Ala | CAG Gln | 432 |
| AAG Lys 145 | AAC Asn | ACG Thr | GTC Val | TGT Cys | GAG Glu 150 | CCG Pro | GCT Ala | TCC Ser | CCA Pro | GGG Gly 155 | GTC Val | AGC Ser | CCT Pro | GCC Ala | TGT Cys 160 | 480 |
| GCC Ala | AGC Ser | CCA Pro | GAG Glu | AAC Asn 165 | TGC Cys | AAG Lys | GAA Glu | CCC Pro | TCC Ser 170 | AGT Ser | GGC Gly | ACC Thr | ATC Ile | CCC Pro 175 | CAG Gln | 528 |
| GCC | AAG Lys | CCC Pro | ACC Thr 180 | CCG Pro | GTG Val | TCC Ser | CCA Pro | GCA Ala 185 | ACC Thr | TCC Ser | AGT Ser | GCC Ala | AGC Ser 190 | ACC Thr | ATG Met | 576 |
| | | | | | | | | | | | GCT Ala | | | | CTG Leu | 624 |
| | | | | | | | | | | | AGG Arg 220 | | | | GAT Asp | 672 |
| | Gly | | | | | | | | | | GGG Gly | | | | | 720 |
| | | | | | | | | | | | GAG Glu | | | | TGC Cys | 768 |
| | | | | Ser | | | | | Asp | | | | | Thr | CCA Pro | 816 |
| | | | Asn | | | | | Cys | | | | | Gly | | ATC Ile | 864 |
| | | Thr | | | | | Ser | | | | | Val | | | CCA Pro | 912 |
| | Cys | | | | | Val | | | | | Asp | | | | AAG Lys 320 | 960 |
| | | | | | Ala | | | | | Thr | | | | | AAC Asn | 1008 |
| CCC | ACC Thr | CCA Pro | GAG Glu | Asn | GGC Gly | GAG Glu | GCG Ala | CCT Pro | Ala | AGC Ser | ACC Thr | AGC Ser | CCC Pro 350 | Thr | CAG Gln | 1056 |



| AGC Ser | TTG Leu | CTG Leu 355 | GTG Val | GAC Asp | TCC Ser | CAG Gln | GCC Ala 360 | AGT Ser | AAG Lys | ACG Thr | CTG Leu | CCC Pro 365 | ATC Ile | CCA Pro | ACC Thr | 1104 |
|-------------------|-------------------|-------------------|-----------------------|-----------------------|-------------------|-------------------|-------------------|-----------------------|-----------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|-------------------|------|
| AGC Ser | GCT Ala 370 | CCC Pro | GTC Val | GCT Ala | CTC Leu | TCC Ser 375 | TCC Ser | ACG Thr | GGG Gly | AAG Lys | CCC Pro 380 | GTT Val | CTG Leu | GAT Asp | GCA Ala | 1152 |
| GGG Gly 385 | CCA Pro | GTG Val | CTC Leu | TTC Phe | TGG Trp 390 | GTG Val | ATC Ile | CTG Leu | GTG Val | TTG Leu 395 | GTT Val | GTG Val | GTG Val | GTC Val | GGC Gly 400 | 1200 |
| TCC Ser | AGC Ser | GCC Ala | TTC Phe | CTC Leu 405 | CTG Leu | TGC Cys | CAC His | CGG Arg | AGG Arg 410 | GCC Ala | TGC Cys | AGG Arg | AAG Lys | CGA Arg 415 | ATT Ile | 1248 |
| CGG Arg | CAG Gln | AAG Lys | CTC Leu 420 | CAC His | CTG Leu | TGC Cys | TAC Tyr | CCG Pro 425 | GTC Val | CAG Gln | ACC Thr | TCC Ser | CAG Gln 430 | CCC Pro | AAG Lys | 1296 |
| CTA Leu | GAG Glu | CTT Leu 435 | GTG Val | GAT Asp | TCC | AGA Arg | CCC Pro 440 | AGG Arg | AGG Arg | AGC Ser | TCA Ser | ACG Thr 445 | CAG Gln | CTG Leu | AGG Arg | 1344 |
| AGT Ser | GGT Gly 450 | GCG Ala | TCG Ser | GTG Val | ACA Thr | GAA Glu 455 | CCC Pro | GTC Val | GCG Ala | GAA Glu | GAG Glu 460 | CGA Arg | GGG Gly | TTA Leu | ATG Met | 1392 |
| AGC Ser 465 | CAG Gln | CCA Pro | CTG Leu | ATG Met | GAG Glu 470 | ACC Thr | TGC Cys | CAC His | AGC Ser | GTG Val 475 | Gly | GCA Ala | GCC Ala | TAC Tyr | CTG Leu 480 | 1440 |
| GAG Glu | AGC Ser | CTG Leu | CCG Pro | CTG Leu 485 | Gln | GAT Asp | GCC Ala | AGC Ser | CCG Pro 490 | GCC Ala | GGG Gly | GGC Gly | CCC | TCG Ser 495 | Ser | 1488 |
| CCC Pro | AGG Arg | GAC Asp | CTT Leu 500 | Pro | GAG Glu | CCC | CGG | GTG Val 505 | Ser | ACG Thr | GAG Glu | CAC His | ACC Thr 510 | : Asn | AAC Asn | 1536 |
| AAG Lys | ATT | GAG Glu 515 | Lys | ATC | TAC | ATC | ATG Met | Lys | GCT Ala | GAC Asp | ACC Thr | GTG Val 525 | Ile | GTG Val | GGG Gly | 1584 |
| ACC | GTG Val | . Lys | GCI Ala | GAG Glu | CTG Leu | CCG Pro 535 | Glu | GGC Gly | CGG Arg | GGC Gly | CTG Leu 540 | ı Ala | GGG Gly | G CCA | GCA Ala | 1632 |
| GAG Glu 545 | Pro | GAG Glu | TTC | G GAG | GAG Glu 550 | Glu | CTC | GAG Glu | GCG Ala | GAC Asp 555 | His | ACC Thr | CCC Pro | C CAC | TAC Tyr 560 | 1680 |
| CCC | GAC Glu | G CAC | G GAC | G ACA 1 Thi 565 | : Glu | A CCC | G CCT | CTG Lev | G GGC 1 Gly 570 | y Sei | TGC Cys | C AGO | C GAS | r GTC p Val 579 | C ATG L Met | 1728 |
| CT(Lev | TCA Sea | A GTO | G GAZ L Gli 580 | u Glu | G GA <i>I</i> | A GGC | AAI Ly: | A GAA S Glu 585 | ı Ası | C CCC | C TTO | G CCC | C AC | r Ala | r GCC a Ala | 1776 |



TCT GGA AAG TGA Ser Gly Lys

- (2) INFORMATION FOR SEQ ID NO:2:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 595 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
- Met Arg Val Leu Leu Ala Ala Leu Gly Leu Leu Phe Leu Gly Ala Leu
 1 10 15
- Arg Ala Phe Pro Gln Asp Arg Pro Phe Glu Asp Thr Cys His Gly Asn 20 25 30
- Pro Ser His Tyr Tyr Asp Lys Ala Val Arg Arg Cys Cys Tyr Arg Cys
 35 40 45
- Pro Met Gly Leu Phe Pro Thr Gln Gln Cys Pro Gln Arg Pro Thr Asp 50 55 60
- Cys Arg Lys Gln Cys Glu Pro Asp Tyr Tyr Leu Asp Glu Ala Asp Arg 65 70 75 80
- Cys Thr Ala Cys Val Thr Cys Ser Arg Asp Asp Leu Val Glu Lys Thr 85 90 95
- Pro Cys Ala Trp Asn Ser Ser Arg Val Cys Glu Cys Arg Pro Gly Met 100 105 110
- Phe Cys Ser Thr Ser Ala Val Asn Ser Cys Ala Arg Cys Phe Phe His 115 120 125
- Ser Val Cys Pro Ala Gly Met Ile Val Lys Phe Pro Gly Thr Ala Gln 130 135 140
- Lys Asn Thr Val Cys Glu Pro Ala Ser Pro Gly Val Ser Pro Ala Cys 145 150 155 160
- Ala Ser Pro Glu Asn Cys Lys Glu Pro Ser Ser Gly Thr Ile Pro Gln 165 170 175
- Ala Lys Pro Thr Pro Val Ser Pro Ala Thr Ser Ser Ala Ser Thr Met 180 185 190
- Pro Val Arg Gly Gly Thr Arg Leu Ala Gln Glu Ala Ala Ser Lys Leu 195 200 205
- Thr Arg Ala Pro Asp Ser Pro Ser Ser Val Gly Arg Pro Ser Ser Asp 210 215 220
- Pro Gly Leu Ser Pro Thr Gln Pro Cys Pro Glu Gly Ser Gly Asp Cys 225 230 235 240



Arg Lys Gln Cys Glu Pro Asp Tyr Tyr Leu Asp Glu Ala Gly Arg Cys Thr Ala Cys Val Ser Cys Ser Arg Asp Leu Val Glu Lys Thr Pro Cys Ala Trp Asn Ser Ser Arg Thr Cys Glu Cys Arg Pro Gly Met Ile Cys Ala Thr Ser Ala Thr Asn Ser Cys Ala Arg Cys Val Pro Tyr Pro Ile Cys Ala Gly Glu Thr Val Thr Lys Pro Gln Asp Met Ala Glu Lys Asp Thr Thr Phe Glu Ala Pro Pro Leu Gly Thr Gln Pro Asp Cys Asn Pro Thr Pro Glu Asn Gly Glu Ala Pro Ala Ser Thr Ser Pro Thr Gln Ser Leu Leu Val Asp Ser Gln Ala Ser Lys Thr Leu Pro Ile Pro Thr 360 Ser Ala Pro Val Ala Leu Ser Ser Thr Gly Lys Pro Val Leu Asp Ala 375 Gly Pro Val Leu Phe Trp Val Ile Leu Val Leu Val Val Val Val Gly 395 Ser Ser Ala Phe Leu Leu Cys His Arg Arg Ala Cys Arg Lys Arg Ile Arg Gln Lys Leu His Leu Cys Tyr Pro Val Gln Thr Ser Gln Pro Lys 420 Leu Glu Leu Val Asp Ser Arg Pro Arg Arg Ser Ser Thr Gln Leu Arg Ser Gly Ala Ser Val Thr Glu Pro Val Ala Glu Glu Arg Gly Leu Met 455 Ser Gln Pro Leu Met Glu Thr Cys His Ser Val Gly Ala Ala Tyr Leu Glu Ser Leu Pro Leu Gln Asp Ala Ser Pro Ala Gly Gly Pro Ser Ser 490 Pro Arg Asp Leu Pro Glu Pro Arg Val Ser Thr Glu His Thr Asn Asn 500 Lys Ile Glu Lys Ile Tyr Ile Met Lys Ala Asp Thr Val Ile Val Gly Thr Val Lys Ala Glu Leu Pro Glu Gly Arg Gly Leu Ala Gly Pro Ala Glu Pro Glu Leu Glu Glu Leu Glu Ala Asp His Thr Pro His Tyr

3 54

555

Pro Glu Gln Glu Thr Glu Pro Pro Leu Gly Ser Cys Ser Asp Val Met 565 570 575

Leu Ser Val Glu Glu Glu Gly Lys Glu Asp Pro Leu Pro Thr Ala Ala 580 585 590

Ser Gly Lys 595

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 699 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA to mRNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (vii) IMMEDIATE SOURCE:
 (B) CLONE: hIgG1Fc
- (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 1..696
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
- GAG CCC AGA TCT TGT GAC AAA ACT CAC ACA TGC CCA CCG TGC CCA GCA 48
 Glu Pro Arg Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
 1 5 10 15
- CCT GAA CTC CTG GGG GGA CCG TCA GTC TTC CTC TTC CCC CCA AAA CCC 96
 Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 20 25 30
- AAG GAC ACC CTC ATG ATC TCC CGG ACC CCT GAG GTC ACA TGC GTG GTG Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val 35
- GTG GAC GTG AGC CAC GAA GAC CCT GAG GTC AAG TTC AAC TGG TAC GTG

 Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val

 50 55 60
- GAC GGC GTG GAG GTG CAT AAT GCC AAG ACA AAG CCG CGG GAG GAG CAG 240
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 70 75 80
- TAC AAC AGC ACG TAC CGG GTG GTC AGC GTC CTC ACC GTC CTG CAC CAG

 Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln

 85 90 95

| GAC Asp | TGG Trp | CTG Leu | AAT Asn 100 | GGC Gly | AAG Lys | GAC Asp | TAC Tyr | AAG Lys 105 | TGC Cys | AAG Lys | GTC Val | TCC Ser | AAC Asn 110 | AAA Lys | GCC Ala | 336 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| CTC Leu | CCA Pro | GCC Ala 115 | CCC Pro | ATG Met | CAG Gln | AAA Lys | ACC Thr 120 | ATC Ile | TCC Ser | AAA Lys | GCC Ala | AAA Lys 125 | GGG Gly | CAG Gln | CCC Pro | 384 |
| CGA Arg | GAA Glu 130 | CCA Pro | CAG Gln | GTG Val | TAC Tyr | ACC Thr 135 | CTG Leu | CCC Pro | CCA Pro | TCC Ser | CGG Arg 140 | GAT Asp | GAG Glu | CTG Leu | ACC Thr | 432 |
| AAG Lys 145 | AAC Asn | CAG Gln | GTC Val | AGC Ser | CTG Leu 150 | ACC Thr | TGC Cys | CTG Leu | GTC Val | AAA Lys 155 | GGC Gly | TTC Phe | TAT Tyr | CCC Pro | AGG Arg 160 | 480 |
| CAC His | ATC Ile | GCC Ala | GTG Val | GAG Glu 165 | TGG Trp | GAG Glu | AGC Ser | AAT Asn | GGG Gly 170 | CAG Gln | CCG Pro | GAG Glu | AAC Asn | AAC Asn 175 | TAC Tyr | 528 |
| AAG Lys | ACC Thr | ACG Thr | CCT Pro 180 | CCC Pro | GTG Val | CTG Leu | GAC Asp | TCC Ser 185 | GAC Asp | GGC Gly | TCC Ser | TTC Phe | TTC Phe 190 | CTC | TAC Tyr | 576 |
| AGC Ser | AAG Lys | CTC Leu 195 | ACC Thr | GTG Val | GAC Asp | AAG Lys | AGC Ser 200 | AGG Arg | TGG Trp | CAG Gln | CAG Gln | GGG Gly 205 | AAC Asn | GTC Val | TTC Phe | 624 |
| TCA Ser | TGC Cys 210 | Ser | GTG Val | ATG Met | CAT His | GAG Glu 215 | Ala | CTG Leu | CAC His | AAC Asn | CAC His 220 | Tyr | ACG | CAG Gln | AAG Lys | 672 |
| | Leu | | | TCT Ser | | Gly | | | | | | | | | | 699 |

- (2) INFORMATION FOR SEQ ID NO:4:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 232 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Glu Pro Arg Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala 1 5 10 15

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro 20 25 30

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val 35 40 45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val 50 55 60



Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln 65 70 75 80

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln 85 90 95

Asp Trp Leu Asn Gly Lys Asp Tyr Lys Cys Lys Val Ser Asn Lys Ala 100 105 110

Leu Pro Ala Pro Met Gln Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro 115 120 125

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr 130 135 140

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Arg 145 150 155 160

His Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr 165 170 175

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr 180 185 190

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe 195 200 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys 210 215 220

Ser Leu Ser Leu Ser Pro Gly Lys

- (2) INFORMATION FOR SEQ ID NO:5:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 720 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA to mRNA
 - (iii) HYPOTHETICAL: NO
 - (iv) ANTI-SENSE: NO
 - - (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 1..720
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

ATG GAG CCA GGG CTG CAA CAA GCA GGC AGC TGT GGG GCT CCT TCC CCT Met Glu Pro Gly Leu Gln Gln Ala Gly Ser Cys Gly Ala Pro Ser Pro 1 5 10 15

| GAC Asp | CCA Pro | GCC Ala | ATG Met 20 | CAG Gln | GTG Val | CAG Gln | CCC Pro | GGC Gly 25 | TCG Ser | GTA Val | GCC Ala | AGC Ser | CCC Pro 30 | TGG Trp | AGA Arg | 96 |
|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|------------------|-----|
| AGC Ser | ACG Thr | AGG Arg 35 | CCC Pro | TGG Trp | AGA Arg | AGC Ser | ACA Thr 40 | AGT Ser | CGC Arg | AGC Ser | TAC Tyr | TTC Phe 45 | TAC Tyr | CTC Leu | AGC Ser | 144 |
| ACC Thr | ACC Thr 50 | GCA Ala | CTG Leu | GTG Val | TGC Cys | CTT Leu 55 | GTT Val | GTG Val | GCA Ala | GTG Val | GCG Ala 60 | ATC Ile | ATT Ile | CTG Leu | GTA Val | 192 |
| CTG Leu 65 | GTA Val | GTC Val | CAG Gln | AAA Lys | AAG Lys 70 | GAC Asp | TCC Ser | ACT Thr | CCA Pro | AAT Asn 75 | ACA Thr | ACT Thr | GAG Glu | AAG Lys | GCC Ala 80 | 240 |
| CCC Pro | CTT Leu | AAA Lys | GGA Gly | GGA Gly 85 | AAT Asn | TGC Cys | TCA Ser | GAG Glu | GAT Asp 90 | CTC Leu | TTC Phe | TGT Cys | ACC Thr | CTG Leu 95 | AAA Lys | 288 |
| | | | | AAG Lys | | | | | | | | | | | | 336 |
| CTC Leu | AAC Asn | AAT Asn 115 | ACC Thr | AAA Lys | CTG Leu | TCA Ser | TGG Trp 120 | AAC Asn | GAA Glu | GAT Asp | GGC Gly | ACC Thr 125 | ATC Ile | CAC His | GGA Gly | 384 |
| CTC Leu | ATA Ile 130 | TAC Tyr | CAG Gln | GAC Asp | GGG Gly | AAC Asn 135 | CTG Leu | ATA Ile | GTC Val | CAA Gln | TTC Phe 140 | CCT Pro | GGC Gly | TTG Leu | TAC Tyr | 432 |
| | Ile | | | CAA Gln | | | | | | | Cys | | | | | 480 |
| GTG Val | GAC Asp | CTG Leu | ACA Thr | TTG Leu 165 | CAG Gln | CTC Leu | CTC Leu | ATC | AAT Asn 170 | Ser | AAG Lys | ATC Ile | AAA Lys | AAG Lys 175 | CAG Gln | 528 |
| | | | | Val | | | | | Val | | | | | Ile | TAC | 576 |
| CAG Gln | AAT Asn | CTC Leu 195 | Ser | CAG Gln | TTT Phe | TTG Leu | CTG Leu 200 | His | TAC | TTA | . CAG | GTC Val 205 | . Asn | TCT Ser | ACC | 624 |
| ATA Ile | TCA Ser 210 | , Val | AGG Arg | GTG Val | GAT Asp | AAT Asn 215 | Phe | CAG Gln | TAT | GTC Val | GAT Asp 220 | Thr | AAC Asr | ACT Thr | TTC Phe | 672 |
| CCI Pro 225 |) Leu | GAT Asp | AAT Asn | GTG Val | CTA Leu 230 | Ser | GTC Val | TTC Phe | TTA | TAT Ty: 235 | : Ser | AGC Ser | TCA Ser | A GAC | 240 | 720 |



(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 239 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Met Glu Pro Gly Leu Gln Gln Ala Gly Ser Cys Gly Ala Pro Ser Pro 1 10 15

Asp Pro Ala Met Gln Val Gln Pro Gly Ser Val Ala Ser Pro Trp Arg 20 25 30

Ser Thr Arg Pro Trp Arg Ser Thr Ser Arg Ser Tyr Phe Tyr Leu Ser 35 40 45

Thr Thr Ala Leu Val Cys Leu Val Val Ala Val Ala Ile Ile Leu Val 50 60

Leu Val Val Gln Lys Lys Asp Ser Thr Pro Asn Thr Thr Glu Lys Ala
65 70 75 80

Pro Leu Lys Gly Gly Asn Cys Ser Glu Asp Leu Phe Cys Thr Leu Lys 85 90 95

Ser Thr Pro Ser Lys Lys Ser Trp Ala Tyr Leu Gln Val Ser Lys His

Leu Asn Asn Thr Lys Leu Ser Trp Asn Glu Asp Gly Thr Ile His Gly
115 120 125

Leu Ile Tyr Gln Asp Gly Asn Leu Ile Val Gln Phe Pro Gly Leu Tyr 130 135 140

Phe Ile Val Cys Gln Leu Gln Phe Leu Val Gln Cys Ser Asn His Ser 145 150 155 160

Val Asp Leu Thr Leu Gln Leu Leu Ile Asn Ser Lys Ile Lys Lys Gln . 165 170 175

Thr Leu Val Thr Val Cys Glu Ser Gly Val Gln Ser Lys Asn Ile Tyr 180 185 190

Gln Asn Leu Ser Gln Phe Leu Leu His Tyr Leu Gln Val Asn Ser Thr 195 200 205

Ile Ser Val Arg Val Asp Asn Phe Gln Tyr Val Asp Thr Asn Thr Phe 210 215 220

Pro Leu Asp Asn Val Leu Ser Val Phe Leu Tyr Ser Ser Ser Asp 225 230 235

- (2) INFORMATION FOR SEQ ID NO:7:
 - (i) SEQUENCE CHARACTERISTICS:



- (A) LENGTH: 705 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA to mRNA
- (ix) FEATURE:
 - (A) NAME/KEY: CDS
 (B) LOCATION: 1..705
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

| Met | GAC Asp | CCA Pro | GGG Gly | Leu | CAG Gln | CAA Gln | GCA Ala | CTC Leu | AAC Asn 10 | GGA Gly | ATG Met | GCC Ala | CCT Pro | CCT Pro 15 | GGA Gly | 48 |
|------------|------------|-------------------|------------------|------------|------------|------------|-------------------|------------------|------------------|------------|------------|-------------------|------------------|------------------|-------------------|-----|
| GAC Asp | ACA Thr | GCC Ala | ATG Met 20 | CAT His | GTG Val | CCG Pro | GCG Ala | GGC Gly 25 | TCC | GTG Val | GCC Ala | AGC Ser | CAC His 30 | CTG Leu | GGG Gly | 96 |
| | | | | | | | | | | | | | | GCT Ala | | 144 |
| | | | | | | | | | | | | | | CAG Gln | | 192 |
| | | | | | | | | | | | | | | GGA Gly | | 240 |
| | | | | | | | | | | | | | | TTC Phe 95 | | 288 |
| | | | | | | | | | | | | | | ACC Thr | | 336 |
| TTG Leu | TCT Ser | TGG Trp 115 | AAC Asn | AAA Lys | GAT Asp | GGC Gly | ATT Ile 120 | CTC Leu | CAT His | GGA Gly | GTC Val | AGA Arg 125 | TAT Tyr | CAG Gln | GAT Asp | 384 |
| | | | | | | | | | | | | Ile | | TGC Cys | CAA Gln | 432 |
| | Gln | | | | | | | | | | Val | | | | TTG Leu 160 | 480 |



GAG CTT CTC ATC AAC AAG CAT ATC AAA AAA CAG GCC CTG GTG ACA GTG Glu Leu Leu Ile Asn Lys His Ile Lys Lys Gln Ala Leu Val Thr Val 170 165 TGT GAG TCT GGA ATG CAA ACG AAA CAC GTA TAC CAG AAT CTC TCT CAA 576 Cys Glu Ser Gly Met Gln Thr Lys His Val Tyr Gln Asn Leu Ser Gln 185 TTC TTG CTG GAT TAC CTG CAG GTC AAC ACC ACC ATA TCA GTC AAT GTG 624 Phe Leu Leu Asp Tyr Leu Gln Val Asn Thr Thr Ile Ser Val Asn Val 200 195 672 GAT ACA TTC CAG TAC ATA GAT ACA AGC ACC TTT CCT CTT GAG AAT GTG Asp Thr Phe Gln Tyr Ile Asp Thr Ser Thr Phe Pro Leu Glu Asn Val 215 220 705 TTG TCC ATC TTC TTA TAC AGT AAT TCA GAC TGA Leu Ser Ile Phe Leu Tyr Ser Asn Ser Asp 230 225

- (2) INFORMATION FOR SEQ ID NO:8:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 234 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Met Asp Pro Gly Leu Gln Gln Ala Leu Asn Gly Met Ala Pro Pro Gly
1 5 10 15

Asp Thr Ala Met His Val Pro Ala Gly Ser Val Ala Ser His Leu Gly 20 25 30

Thr Thr Ser Arg Ser Tyr Phe Tyr Leu Thr Thr Ala Thr Leu Ala Leu 35 40 45

Cys Leu Val Phe Thr Val Ala Thr Ile Met Val Leu Val Val Gln Arg 50 60

Thr Asp Ser Ile Pro Asn Ser Pro Asp Asn Val Pro Leu Lys Gly Gly 65 70 75 80

Asn Cys Ser Glu Asp Leu Leu Cys Ile Leu Lys Arg Ala Pro Phe Lys 85 90 95

Lys Ser Trp Ala Tyr Leu Gln Val Ala Lys His Leu Asn Lys Thr Lys 100 105 110

Leu Ser Trp Asn Lys Asp Gly Ile Leu His Gly Val Arg Tyr Gln Asp 115 120 125

Gly Asn Leu Val Ile Gln Phe Pro Gly Leu Tyr Phe Ile Ile Cys Gln 130 135 140



Leu Gln Phe Leu Val Gln Cys Pro Asn Asn Ser Val Asp Leu Lys Leu 145 150 155 160

Glu Leu Leu Ile Asn Lys His Ile Lys Lys Gln Ala Leu Val Thr Val 165 170 175

Cys Glu Ser Gly Met Gln Thr Lys His Val Tyr Gln Asn Leu Ser Gln 180 185 190

Phe Leu Leu Asp Tyr Leu Gln Val Asn Thr Thr Ile Ser Val Asn Val

Asp Thr Phe Gln Tyr Ile Asp Thr Ser Thr Phe Pro Leu Glu Asn Val 210 215 220

Leu Ser Ile Phe Leu Tyr Ser Asn Ser Asp 225 230

- (2) INFORMATION FOR SEQ ID NO:9:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 39 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: DNA
 - (vii) IMMEDIATE SOURCE:

(B) CLONE: 5' PCR Primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

ATAGCGGCCG CCACCATGCG CGTCCTCCTC GCCGCGCTG

39

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- (2) INFORMATION FOR SEQ ID NO:10:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 39 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: DNA
 - (vii) IMMEDIATE SOURCE:

(B) CLONE: 3' PCR Primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

ACAAGATCTG GGCTCCTTCC CCGTGGAGGA GAGAGCGAC

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 24 base pairs
 - (B) TYPE: nucleic acid



| (ii) M | OLECULE TYPE: DNA | |
|------------|--|----|
| (vii) I | MMEDIATE SOURCE: (B) CLONE: BGL II Adaptor | |
| (xi) S | SEQUENCE DESCRIPTION: SEQ ID NO:11: | |
| GATCTGGCAA | CGAAGGTACC ATGG | 24 |
| (2) INFORM | MATION FOR SEQ ID NO:12: | |
| (i) S | SEQUENCE CHARACTERISTICS: (A) LENGTH: 20 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear | |
| (ii) N | MOLECULE TYPE: DNA | |
| (vii) l | IMMEDIATE SOURCE: (B) CLONE: BGL II Adaptor | |
| ·(xi) \$ | SEQUENCE DESCRIPTION: SEQ ID NO:12: | |
| CCATGGTAC | C TTCGTTGCCA | 20 |
| (2) INFORM | MATION FOR SEQ ID NO:13: | |
| | SEQUENCE CHARACTERISTICS: (A) LENGTH: 33 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear | |
| (ii) 1 | MOLECULE TYPE: cDNA | |
| (vii) | IMMEDIATE SOURCE: (B) CLONE: Upstream sequence | |
| (ix) 1 | FEATURE: (A) NAME/KEY: CDS (B) LOCATION: 133 | · |
| (xi) | SEQUENCE DESCRIPTION: SEQ ID NO:13: | |
| | GT GGG GCT CCT TCC CCT GAC CCA GCC ys Gly Ala Pro Ser Pro Asp Pro Ala 5 10 | 33 |

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 11 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Met Gly Cys Gly Ala Pro Ser Pro Asp Pro Ala 1 . 5 10

- (2) INFORMATION FOR SEQ ID NO:15:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 8 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: peptide
 - (vii) IMMEDIATE SOURCE:
 - (B) CLONE: FLAG peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Asp Tyr Lys Asp Asp Asp Lys 1

- (2) INFORMATION FOR SEQ ID NO:16:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: DNA
 - (vii) IMMEDIATE SOURCE:
 - (B) CLONE: Murine cDNA Primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

AGATGCTTTG ACACTTG

| (2) INFORMATION FOR SEQ ID NO:17: | |
|---|----|
| (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 17 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear | |
| (ii) MOLECULE TYPE: DNA | |
| <pre>(vii) IMMEDIATE SOURCE: (B) CLONE: Human cDNA Primer</pre> | |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17: | |
| ATCACCAGAT TCCCATC | 17 |
| (2) INFORMATION FOR SEQ ID NO:18: | |
| (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 663 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear | |
| (ii) MOLECULE TYPE: cDNA to mRNA | |
| (iii) HYPOTHETICAL: NO | |
| (iv) ANTI-SENSE: NO | |
| (vii) IMMEDIATE SOURCE: (B) CLONE: muCD30-L | • |
| (ix) FEATURE: (A) NAME/KEY: CDS (B) LOCATION: 1663 | |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18: | |
| ATG CAG GTG CAG CCC GGC TCG GTA GCC AGC CCC TGG AGA AGC ACG AGG Met Gln Val Gln Pro Gly Ser Val Ala Ser Pro Trp Arg Ser Thr Arg 1 5 10 15 | 48 |
| CCC TGG AGA AGC ACA AGT CGC AGC TAC TTC TAC CTC AGC ACC ACC GCA Pro Trp Arg Ser Thr Ser Arg Ser Tyr Phe Tyr Leu Ser Thr Thr Ala 20 25 30 | 96 |



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CTG GTG TGC CTT GTT GTG GCA GTG GCG ATC ATT CTG GTA CTG GTA GTC Leu Val Cys Leu Val Val Ala Val Ala Ile Ile Leu Val Leu Val Val 35

| CAG Gln | AAA Lys 50 | AAG Lys | GAC Asp | TCC Ser | ACT Thr | CCA Pro 55 | Asn | ACA Thr | ACT Thr | GAG Glu | AAG Lys 60 | GCC Ala | CCC Pro | CTT Leu | AAA Lys | 192 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| GGA Gly 65 | GGA Gly | AAT Asn | TGC Cys | TCA Ser | GAG Glu 70 | GAT Asp | CTC Leu | TTC Phe | TGT Cys | ACC Thr 75 | CTG Leu | AAA Lys | AGT Ser | ACT Thr | CCA Pro 80 | 240 |
| TCC Ser | AAG Lys | AAG Lys | TCA Ser | TGG Trp 85 | GCC Ala | TAC Tyr | CTC Leu | CAA Gln | GTG Val 90 | TCA Ser | AAG Lys | CAT His | CTC Leu | AAC Asn 95 | AAT Asn | 288 |
| ACC Thr | AAA Lys | CTG Leu | TCA Ser 100 | TGG Trp | AAC Asn | GAA Glu | GAT Asp | GGC Gly 105 | ACC Thr | ATC Ile | CAC His | GGA Gly | CTC Leu 110 | ATA Ile | TAC Tyr | 336 |
| CAG Gln | GAC Asp | GGG Gly 115 | AAC Asn | CTG Leu | ATA Ile | GTC Val | CAA Gln 120 | TTC Phe | CCT Pro | GGC Gly | TTG Leu | TAC Tyr 125 | TTC Phe | ATC Ile | GTT Val | 384 |
| TGC Cys | CAA Gln 130 | CTG Leu | CAG Gln | TTC Phe | CTC Leu | GTG Val 135 | CAG Gln | TGC Cys | TCA Ser | AAT Asn | CAT His 140 | TCT Ser | GTG Val | GAC Asp | CTG Leu | 432 |
| ACA Thr 145 | TTG Leu | CAG Gln | CTC Leu | CTC Leu | ATC Ile 150 | AAT Asn | TCC Ser | AAG Lys | ATC Ile | AAA Lys 155 | Lys | CAG Gln | ACG Thr | TTG Leu | GTA Val 160 | 480 |
| ACA Thr | GTG Val | TGT Cys | GAG Glu | TCT Ser 165 | Gly | GTT Val | CAG Gln | AGT Ser | AAG Lys 170 | Asn | ATC | TAC Tyr | CAG Gln | AAT Asn 175 | Leu | 528 |
| TCT Ser | CAG Gln | TTT | TTG Leu 180 | Leu | CAT | TAC | TTA Leu | CAG Gln 185 | Val | AAC Asn | : TCT Ser | ACC | ATA Ile | Ser | GTC Val | 576 |
| AGG Arg | GTG Val | GAT Asp 195 | Asn | TTC Phe | CAG Gln | TAI Tyr | GTG Val | Asp | ACA Thr | AAC Asn | ACT Thr | TTC Phe 205 | Pro | CTT Leu | GAT Asp | 624 |
| | | . Lev | | | | | туг | | | | GÁC Asp 220 |) | | | | 663 |

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 220 amino acids
 (B) TYPE: amino acid

 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Met Gln Val Gln Pro Gly Ser Val Ala Ser Pro Trp Arg Ser Thr Arg 5 .



Pro Trp Arg Ser Thr Ser Arg Ser Tyr Phe Tyr Leu Ser Thr Thr Ala 20 25 30

Leu Val Cys Leu Val Val Ala Val Ala Ile Ile Leu Val Leu Val Val 35 40 45

Gln Lys Lys Asp Ser Thr Pro Asn Thr Thr Glu Lys Ala Pro Leu Lys
50 60

Gly Gly Asn Cys Ser Glu Asp Leu Phe Cys Thr Leu Lys Ser Thr Pro
65 70 75 80

Ser Lys Lys Ser Trp Ala Tyr Leu Gln Val Ser Lys His Leu Asn Asn 85 90 95

Thr Lys Leu Ser Trp Asn Glu Asp Gly Thr Ile His Gly Leu Ile Tyr 100 105 110

Gln Asp Gly Asn Leu Ile Val Gln Phe Pro Gly Leu Tyr Phe Ile Val 115 120 125

Cys Gln Leu Gln Phe Leu Val Gln Cys Ser Asn His Ser Val Asp Leu 130 135 140

Thr Leu Gln Leu Leu Ile Asn Ser Lys Ile Lys Lys Gln Thr Leu Val 145 150 155 160

Thr Val Cys Glu Ser Gly Val Gln Ser Lys Asn Ile Tyr Gln Asn Leu 165 170 175

Ser Gln Phe Leu Leu His Tyr Leu Gln Val Asn Ser Thr Ile Ser Val 180 185 190

Arg Val Asp Asn Phe Gln Tyr Val Asp Thr Asn Thr Phe Pro Leu Asp 195 200 205

Asn Val Leu Ser Val Phe Leu Tyr Ser Ser Ser Asp 210 215 220

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 125 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein fragment
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (vii) IMMEDIATE SOURCE:

(B) CLONE: huCD30 fragment (PRELIM)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:



Pro Gly Asp Thr Val Xaa His Val Pro Ala Gly Ser Glu Ala Ser His 1 5 10 15

Leu Gly Thr Thr Ser Arg Xaa Tyr Phe Tyr Leu Thr Thr Xaa Thr Leu 20 25 30

Ala Leu Cys Leu Val Phe Thr Val Ala Thr Ile Met Val Leu Val Val 35 40 45

Gln Arg Thr Asp Ser Ile Pro Asn Ser Pro Asp Asn Val Pro Leu Lys 50 60

Gly Gly Asn Cys Ser Glu Asp Leu Leu Cys Ile Leu Lys Arg Ala Pro 65 70 75 80

Phe Lys Lys Ser Trp Ala Tyr Leu Gln Val Xaa Lys His Leu Asn Lys 85 90 95

Thr Xaa Leu Ser Trp Asn Lys Asp Gly Ile Leu His Gly Val Arg Tyr 100 105 110

Gln Asp Gly Asn Leu Val Ile Gln Phe Pro Gly Phe Val 115 120 _ 125

(2) INFORMATION FOR SEQ ID NO:21:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 130 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein fragment
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (vii) IMMEDIATE SOURCE:

(B) CLONE: muCD30 fragment (PRELIM)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Met Gln Val Gln Pro Gly Ser Val Ala Ser Pro Trp Arg Ser Thr Arg 1 5 10 15

Pro Trp Arg Ser Thr Ser Arg Ser Tyr Phe Tyr Leu Ser Thr Thr Ala 20 25 30

Leu Val Cys Leu Val Val Xaa Val Ala Ile Ile Leu Val Leu Val Val 35 40 45

Gln Lys Lys Asp Ser Thr Pro Asn Thr Thr Glu Lys Ala Pro Leu Lys 50 60

Gly Gly Asn Cys Ser Glu Asp Leu Phe Cys Thr Leu Lys Ser Thr Pro 65 70 75 80



Ser Lys Lys Ser Trp Ala Tyr Leu Gln Val Ser Lys His Leu Asn Asn 85 90 95

Thr Lys Leu Ser Trp Asn Glu Asp Gly Thr Ile His Gly Leu Ile Tyr 100 105 110

Gln Asp Gly Asn Leu Ile Val Gln Phe Pro Gly Leu Tyr Phe Ile Val 115 120 125

Cys Gln 130

- (2) INFORMATION FOR SEQ ID NO:22:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 648 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA to mRNA
 - (vii) IMMEDIATE SOURCE:
 - (B) CLONE: huCD30-L
 - (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 1..648
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

| ATG | CAT | GTG | CCG | GCG | GGC | TCC | GTG | GCC | AGC | CAC | CTG | GGG | ACC | ACG | AGC | 48 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | His | Val | Pro | Ala | Gly | Ser | Val | Ala | Ser | His | Leu | Gly | Thr | Thr | Ser | |
| 1 | | | | 5 | _ , | | | | 10 | | | | | 15 | | |

| CGC | AGC | TAT | TTC | TAT | TTG | ACC | ACA | GCC | ACT | CTG | GCT | CTG | TGC | CTT | GTC | 96 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Ara | Ser | Tvr | Phe | Tyr | Leu | Thr | Thr | Ala | Thr | Leu | Ala | Leu | Cys | Leu | Val | |
| | | • | 20 | • | | • | | 25 | | | | | 30 | | | |

- TTC ACG GTG GCC ACT ATT ATG GTG TTG GTC GTT CAG AGG ACG GAC TCC 144

 Phe Thr Val Ala Thr Ile Met Val Leu Val Val Gln Arg Thr Asp Ser

 35 40 45
- ATT CCC AAC TCA CCT GAC AAC GTC CCC CTC AAA GGA GGA AAT TGC TCA 192
 Ile Pro Asn Ser Pro Asp Asn Val Pro Leu Lys Gly Gly Asn Cys Ser
 50 55 60
- GAA GAC CTC TTA TGT ATC CTG AAA AGA GCT CCA TTC AAG AAG TCA TGG
 Glu Asp Leu Leu Cys Ile Leu Lys Arg Ala Pro Phe Lys Lys Ser Trp
 65 70 75 80
- GCC TAC CTC CAA GTG GCA AAG CAT CTA AAC AAA ACC AAG TTG TCT TGG 288 Ala Tyr Leu Gln Val Ala Lys His Leu Asn Lys Thr Lys Leu Ser Trp 85 90 95



| AAC Asn | AAA Lys | GAT Asp | GGC Gly 100 | ATT Ile | CTC Leu | CAT His | GGA Gly | GTC Val 105 | Arg | TAT Tyr | CAG Gln | GAT Asp | GGG Gly 110 | AAT Asn | CTG Leu | 336 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| GTG Val | ATC Ile | CAA Gln 115 | TTC Phe | CCT Pro | GGT Gly | TTG Leu | TAC Tyr 120 | TTC Phe | ATC Ile | ATT Ile | TGC Cys | CAA Gln 125 | CTG Leu | CAG Gln | TTT Phe | 384 |
| CTT Leu | GTA Val 130 | CAA Gln | TGC Cys | CCA Pro | AAT Asn | AAT Asn 135 | TCT Ser | GTC Val | GAT Asp | CTG Leu | AAG Lys 140 | TTG Leu | GAG Glu | CTT Leu | CTC Leu | 432 |
| ATC Ile 145 | AAC Asn | AAG Lys | CAT His | ATC Ile | AAA Lys 150 | AAA Lys | CAG Gln | GCC Ala | CTG Leu | GTG Val 155 | ACA Thr | GTG Val | TGT Cys | GAG Glu | TCT Ser 160 | 480 |
| GGA Gly | ATG Met | CAA Gln | ACG Thr | AAA Lys 165 | CAC His | GTA Val | TAC Tyr | CAG Gln | AAT Asn 170 | CTC Leu | TCT Ser | CAA Gln | TTC Phe | TTG Leu 175 | CTG Leu | 528 |
| GAT Asp | TAC Tyr | CTG Leu | CAG Gln 180 | GTC Val | AAC Asn | ACC Thr | ACC Thr | ATA Ile 185 | TCA Ser | GTC Val | AAT Asn | GTG Val | GAT Asp 190 | ACA Thr | TTC Phe | 576 |
| CAG Gln | TAC Tyr | ATA Ile 195 | GAT Asp | ACA Thr | AGC Ser | ACC Thr | TTT Phe 200 | Pro | CTT Leu | GAG Glu | AAT Asn | GTG Val 205 | Leu | TCC Ser | ATC Ile | 624 |
| | TTA Leu 210 | | | | | | | | | | | | | | | 648 |

- (2) INFORMATION FOR SEQ ID NO:23:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 215 amino acids
 - (B) TYPE: amino acid(D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Met His Val Pro Ala Gly Ser Val Ala Ser His Leu Gly Thr Thr Ser

Arg Ser Tyr Phe Tyr Leu Thr Thr Ala Thr Leu Ala Leu Cys Leu Val

Phe Thr Val Ala Thr Ile Met Val Leu Val Val Gln Arg Thr Asp Ser

Ile Pro Asn Ser Pro Asp Asn Val Pro Leu Lys Gly Gly Asn Cys Ser

Glu Asp Leu Leu Cys Ile Leu Lys Arg Ala Pro Phe Lys Lys Ser Trp



Ala Tyr Leu Gln Val Ala Lys His Leu Asn Lys Thr Lys Leu Ser Trp 85 90 95

Asn Lys Asp Gly Ile Leu His Gly Val Arg Tyr Gln Asp Gly Asn Leu 100 105 110

Val Ile Gln Phe Pro Gly Leu Tyr Phe Ile Ile Cys Gln Leu Gln Phe 115 120 125

Leu Val Gln Cys Pro Asn Asn Ser Val Asp Leu Lys Leu Glu Leu Leu 130 135 140

Ile Asn Lys His Ile Lys Lys Gln Ala Leu Val Thr Val Cys Glu Ser 145 150 155 160

Gly Met Gln Thr Lys His Val Tyr Gln Asn Leu Ser Gln Phe Leu Leu 165 170 175

Asp Tyr Leu Gln Val Asn Thr Thr Ile Ser Val Asn Val Asp Thr Phe 180 185 190

Gln Tyr Ile Asp Thr Ser Thr Phe Pro Leu Glu Asn Val Leu Ser Ile 195 200 205

Phe Leu Tyr Ser Asn Ser Asp 210 215